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| 10/828,345 | 04/21/2004 | Hyun-Kyung Choi | P-0658 | 6695 |

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| EXAMINER | |
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| RUTKOWSKI, JEFFREY M | |
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/828,345 | CHOI, HYUN-KYUNG | |
| | Examiner | Art Unit | |
| | JEFFREY M. RUTKOWSKI | 2419 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *07 October 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-12,15-19,23 and 25-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12,15-19,23 and 25-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

## DETAILED ACTION

**Claims 13-14, 20-22, 24 and 28-45** have been cancelled.

### *Continued Examination Under 37 CFR 1.114*

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/07/2008 has been entered.

### *Claim Rejections - 35 USC § 112*

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. **Claims 1-12, 15-19, 23 and 25-27** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear what the relationship between the packet services application and the first and second protocols. It is also unclear what the relationship is between the second protocol and the second modem. For example, it is unclear if the second protocol is used by the second modem.

### *Claim Rejections - 35 USC § 103*

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. **Claims 1-2, 6-12, 15-18** are rejected under 35 U.S.C. 103(a) as being unpatentable over Han (US 2003/0103518) in view of Chen et al. (US Pat 5,666,362), hereinafter referred to as Chen, and the Admitted Prior Art, hereinafter referred to as the APA.

7. For **claim 1**, Han discloses a single mode terminal, comprising: a video chip (see Fig. 1) having an application of packet data services (see Fig. 1 Box 111) and a first communication protocol (see Fig. 1 Boxes 103, 105, 107, and 109); and a first physical layer coupled to the video chip through an interface (see Fig. 1 Box 101) and having a protocol stack relating to a first communication network (see Fig. 1 Boxes 103, 105, 107, and 109).

8. Han does not disclose a second modem chip, a second data communication protocol, and a second network modem chip coupled to the video chip through an interface and having a protocol stack relating to a second communication network. The APA discloses Dual Band Dual Mode (DBDM) terminals include CDMA (first modem) and WCDMA (second modem chip) modem chips connected to a video chip **[0007 of the PG Pub for the instant application]**. It would have been obvious to a person of ordinary skill in the art at the time of the invention to use the APA's DBDM terminal in Han's invention to make use of the network resources that are pertinent to a particular area **[0006 of the Pg Pub for the instant application]**.

9. The combination of Han and the APA disclose the use of two modem chips and a video chip that are interconnected via interfaces. The combination of Han and the APA does not disclose the use of a UART interface to transmit PPP packets. Chen discloses a UART interface that is used to transmit PPP packets between two network devices **[figure 3]**. It would have been obvious to a person of ordinary skill in the art at the time of the invention to use Chen's UART interface in Han's invention to provide network communications via standard equipment **[Chen, col. 4 lines 16-26]**.

10. The combination of Han and the APA disclose the CDMA chip performs protocol conversion between PPP and IP **[0011 of the Pg Pub for the instant application]**. Also, the APA discloses the video chip is used to provide packet data services **[0008 of the Pg Pub for the instant application]**. Chen discloses PPP is used for transmitting and receiving TCP/IP packets **[col. 3 lines 5-10]**. It would have been obvious to a person of ordinary skill in the art at the time of the invention to use a protocol converter in the video chip of Han's invention because Chen's UART interface only supports the PPP protocol and the APA video chip provides IP video services.

11. For **claims 2 and 12**, Han further teaches the first data communication protocol performs IP packet processing and performs mutual conversion of IP packets and PPP packets only in communication with the first network (see paragraph 27).

12. For **claims 6-7 and 17-18**, Han further teaches the application of packet data service is directly interworked with a socket of a TCP/IP superior layer (see paragraph 24 and Fig. 1 Boxes 111 and 109).

13. For **claim 8**, Han does not disclose a first and second modem chip. The APA discloses the use of CDMA and WCDMA modem chips **[0007 of the Pg Pub for the instant application]**. It would have been obvious to a person of ordinary skill in the art at the time of the invention to use the APA's first and second modem chips in Han's invention to make use of the network resources that are pertinent to a particular area **[0006 of the Pg Pub for the instant application]**.

14. For **claims 9 and 15,** Han further teaches the first data communication protocol, the first network modem chip and the first communication network are based in a CDMA network (see paragraph 5).

15. For **claims 10 and 16**, Han does not disclose the use of a WCDMA network. The APA discloses the use of a modem chip that is used in a WCDMA network **[0012 of the Pg Pub for the instant application]**. It would have been obvious to a person of ordinary skill in the art at the time of the invention to use the APA's WCDMA modem chip in Han's invention to make use of the network resources that are pertinent to a particular area **[0006 of the Pg Pub for the instant application]**.

16. For **claim 11**, Han teaches a single mode terminal, comprising: a video chip (see Fig. 1) having an application of packet data services (see Fig. 1 Box 111) and a first communication protocol (see Fig. 1 Boxes 103, 105, 107, and 109); and a first physical layer coupled to the video chip through an interface (see Fig. 1 Box 101) and having a protocol stack relating to a first communication network (see Fig. 1 Boxes 103, 105, 107, and 109); when a packet is transmitted from the terminal to a communication network a packet is provided to the physical layer from the video chip (see paragraphs 26 and 28), and when a packet is transmitted form the

communication network to the terminal, an IP frame is received at the video chip through the physical layer the video chip performing the packet processing and interworking with a socket (see paragraph 29 and 31 and Fig. 1).

17. Han does not disclose a second modem chip, a second data communication protocol, and a second network modem chip coupled to the video chip through an interface and having a protocol stack relating to a second communication network. The APA discloses Dual Band Dual Mode (DBDM) terminals include CDMA (first modem) and WCDMA (second modem chip) modem chips connected to a video chip **[0007 of the PG Pub for the instant application]**. It would have been obvious to a person of ordinary skill in the art at the time of the invention to use the APA's DBDM terminal in Han's invention to make use of the network resources that are pertinent to a particular area **[0006 of the Pg Pub for the instant application]**.

18. The combination of Han and the APA disclose modem chips and a video chip interconnected via interfaces. The combination of Han and the APA does not disclose the use of a UART interface. Chen discloses a UART interface that is used to transmit PPP packets between two network devices **[figure 3]**. It would have been obvious to a person of ordinary skill in the art at the time of the invention to use Chen's UART interface in Han's invention to provide network communications via standard equipment **[Chen, col. 4 lines 16-26]**.

19. The combination of Han and the APA disclose the CDMA chip performs protocol conversion between PPP and IP **[0011 of the Pg Pub for the instant application]**. Also, the APA discloses the video chip is used to provide packet data services **[0008 of the Pg Pub for the instant application]**. Chen discloses PPP is used for transmitting and receiving TCP/IP packets **[col. 3 lines 5-10]**. It would have been obvious to a person of ordinary skill in the art at

the time of the invention to use a protocol converter in the video chip of Han's invention because Chen's UART interface only supports the PPP protocol and the APA video chip provides IP video services.

20. **Claims 3 and 4** are rejected under 35 U.S.C. 103(a) as being unpatentable over Han in view of Chen and the APA, as applied to **claim 2** above, and further in view of Hayem et al. (US Pg Pub 2004/0185899), hereinafter referred to as Hayem.

21. For **claim 3,** the combination of Han, Chen and the APA disclose the use of a UART interface. The combination of Han, Chen and the APA does not disclose the use of a DPRAM interface. Hayem further teaches a chip communicating with the second network modem chip through a DPRAM interface (see paragraph 62). Thus, it would have been obvious to one of ordinary skill in the art to use the system of Hayem in the system of Han. The motivation for doing so is to increase the processing speed by using a DPRAM so that data can be read and written simultaneously.

22. For **claim 4**, Han does not disclose the use of a UART driver. Chen discloses the use of an UART driver **210 [figure 4]**. It would have been obvious to a person of ordinary skill in the art at the time of the invention to use an UART driver in Han's invention to provide network communications via standard equipment **[Chen, col. 4 lines 16-26]**.

23. **Claim 5** is rejected under 35 U.S.C. 103(a) as being unpatentable over Han in view of Chen, the APA and Hayem, as applied to **claim 3** above, and further in view of Lee (KR 2003084005).

24. For **claim 5,** the combination of Han, Chen, the APA and Hayem does not disclose the use of an IPC driver through the DPRAM interface. However, Lee teaches a DPRAM with a

IPC (see Abstract). Thus, it would have been obvious to one of ordinary skill in the art to use the IPC of Lee in the system of Han in view of Hayem and Nah. The motivation for doing so is to add the benefit of an interrupt system.

25. **Claims 19, 23, and 25-27** are rejected under 35 U.S.C. 103(a) as being unpatentable over Han in view of Chen, the APA and Park et al. (EP 1 213 941), hereinafter referred to as Park.

26. For **claim 19,** Han teaches a terminal including a video chip (see Fig. 1) having a first data communication protocol (see Fig. 1 Boxes 103, 105, 107, and 109; transmitting packet data to a first network (see paragraph 28); receiving data from the first network (see paragraph 31); and transmitting a pertinent IP frame to a network by transmitting the IP packet directly to the physical layer (see paragraph 28).

27. Han does not disclose judging a system mode. Park teaches judging a system mode (see paragraph 23); the system mode is selected from a first communication network service and a second communication network service (see paragraph 23); and selecting the network based on system mode and receiving data from the second network (see paragraph 23; Once handoff is complete, the terminal begins receiving data from the second network.). Thus, it would have been obvious to one of ordinary skill in the art to use the system of Park in the system of Han. The motivation for doing so is to provide the mobile terminal with the best service available.

28. Han does not disclose a second modem chip, a second data communication protocol, and a second network modem chip coupled to the video chip through an interface and having a protocol stack relating to a second communication network. The APA discloses Dual Band Dual Mode (DBDM) terminals include CDMA (first modem) and WCDMA (second modem chip) modem chips connected to a video chip **[0007 of the PG Pub for the instant application]**. It

would have been obvious to a person of ordinary skill in the art at the time of the invention to use the APA's DBDM terminal in Han's invention to make use of the network resources that are pertinent to a particular area **[0006 of the Pg Pub for the instant application]**.

29. The combination of Han and the APA disclose modem chips and a video chip interconnected via interfaces. The combination of Han and the APA does not disclose the use of a UART interface. Chen discloses a UART interface that is used to transmit PPP packets between two network devices **[figure 3]**. It would have been obvious to a person of ordinary skill in the art at the time of the invention to use Chen's UART interface in Han's invention to provide network communications via standard equipment **[Chen, col. 4 lines 16-26]**.

30. The combination of Han and the APA disclose the CDMA chip performs protocol conversion between PPP and IP **[0011 of the Pg Pub for the instant application]**. Also, the APA discloses the video chip is used to provide packet data services **[0008 of the Pg Pub for the instant application]**. The WCDMA uses IP as a communications protocol while the CDMA chip uses PPP as the communication protocol **[0010, 0013 of the Pg Pub for the instant application]**. Chen discloses PPP is used for transmitting and receiving TCP/IP packets **[col. 3 lines 5-10]**. It would have been obvious to a person of ordinary skill in the art at the time of the invention to use a protocol converter in the video chip of Han's invention because Chen's UART interface only supports the PPP protocol and the APA video chip provides IP video services.

31. For **claim 23**, Han does not disclose the use of PPP tot IP conversion. The APA discloses the CDMA chip performs protocol conversion between PPP and IP **[0011 of the Pg Pub for the instant application]**. Also, the APA discloses the video chip is used to provide packet data services **[0008 of the Pg Pub for the instant application]**. The WCDMA uses IP as

a communications protocol while the CDMA chip uses PPP as the communication protocol **[0010, 0013 of the Pg Pub for the instant application]**. Chen discloses PPP is used for transmitting and receiving TCP/IP packets **[col. 3 lines 5-10]**. It would have been obvious to a person of ordinary skill in the art at the time of the invention to use a protocol converter in the video chip of Han's invention because Chen's UART interface only supports the PPP protocol and the APA video chip provides IP video services.

32. For **claim 25**, Han does not disclose PPP to IP protocol conversion or the use of an UART interface. The APA discloses the CDMA chip performs protocol conversion between PPP and IP **[0011 of the Pg Pub for the instant application]**. Also, the APA discloses the video chip is used to provide packet data services **[0008 of the Pg Pub for the instant application]**. The CDMA chip uses PPP as the communication protocol **[0010, 0013 of the Pg Pub for the instant application]**. Chen discloses PPP is used for transmitting and receiving TCP/IP packets over an UART interface **[col. 3 lines 5-10, figure 3]**. It would have been obvious to a person of ordinary skill in the art at the time of the invention to use a protocol converter in the video chip of Han's invention because PPP connections exist only between two devices **[Chen, col. 3 line 15]** and the WCDMA chip can communicate with the video chip via IP protocol **[0013 of the Pg Pub for the instant application]**. It also would have been obvious to a person of ordinary skill in the art at the time of the invention to use an UART interface in Han's invention to provide network communications via standard equipment **[Chen, col. 4 lines 16-26]**.

33. For **claim 26**, Han further teaches the first data communication protocol, the first network modem chip and the first communication network are based in a CDMA network (see paragraph 5).

34. For **claim 27**, Han does not disclose the use of a WCDMA network. The APA discloses the use of a modem chip that is used in a WCDMA network **[0012 of the Pg Pub for the instant application]**. It would have been obvious to a person of ordinary skill in the art at the time of the invention to use the APA's WCDMA modem chip in Han's invention to make use of the network resources that are pertinent to a particular area **[0006 of the Pg Pub for the instant application]**.

***Response to Arguments***

35. Applicant's arguments with respect to **claims 1-12, 15-19, 23 and 25-27** have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEFFREY M. RUTKOWSKI whose telephone number is (571)270-1215. The examiner can normally be reached on Monday - Friday 7:30-5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (571) 272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jeffrey M Rutkowski
Patent Examiner
11/21/2008

/Hassan Kizou/

Supervisory Patent Examiner, Art Unit 2419